**Amendments to the Claims:**

The following listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently amended) A method for the detection of cytosine methylations in DNA obtained from tissue samples or bodily fluids, the method comprising the steps of:

a) treating the DNA to be investigated with a chemical or with an enzyme so that 5-methylcytosine remains unchanged, while unmethylated cytosine is converted to uracil or to another base which differs from cytosine in its base-pairing behavior,

b) amplifying the treated DNA of step (a) using a polymerase and at least one primer, whose 5'-end is joined with a probe via a linker, wherein the probe includes at least one methylation-specific CG dinucleotide, and wherein the secondary structure of the probe comprises a hairpin shape or a duplex structure, and whereby a primer extension product is produced,

c) separating the primer extension product from the ~~matrix strand~~ treated DNA of step (a),

d) hybridizing the probe intramolecularly to the primer extension product, whereby the hybridization occurs ~~as a function of the methylation state of the DNA~~ only if the cytosine positions to be analyzed were initially methylated,

e) detecting whether a hybridization of the probe has occurred, whereby DNA from tissue samples or bodily fluids is analyzed.

2. (Previously presented) The method according to claim 1, wherein the step of treating with a chemical or enzyme comprises treating with a bisulfite.

3. (Previously presented) The method according to claim 1, wherein the step of treating with a chemical or enzyme comprises treating with a cytidine deaminase.

4. (Previously presented) The method according to claim 1, wherein the amplification in step b) is carried out by means of a polymerase chain reaction.

5. (Previously presented) The method according to claim 4, wherein the polymerase chain reaction is carried out in the form of the MSP or heavy methyl method.

6. (Previously presented) The method according to claim 1, wherein the probe comprises two signal components which are found in spatial proximity to one another in the inactive form, and which are separated from one another by the hybridization of the probe to the primer extension product.

7. (Previously presented) The method according to claim 6, wherein the two signal components comprise a quencher-fluorescent dye pair.

8. (Currently amended) The method according to claim 6, wherein spatial separation of the two signal components in the inactive form is maintained by the secondary structure of the probe~~, the secondary structure of the probe comprising a hairpin shape~~.

9. (Previously presented) The method according to claim 1, wherein the primer of step b) comprises two signal components which are separated from one another in the inactive form, and which are brought into spatial proximity to one another by the hybridization of the probe to the primer extension product.

10. (Previously presented) The method according to claim 9, wherein the two signal components in the active form generate a signal via fluorescence-resonance energy transfer.

11. (Previously presented) The method according to claim 1, wherein the probe comprises at least one signal component and wherein an additional oligonucleotide comprises at least one signal component, whereby the signal components of the probe and the additional oligonucleotide are found in spatial proximity to one another in the inactive form, and are separated from one another by the hybridization of the probe to the primer extension product.

12. (Previously presented) The method according to claim 11, wherein the signal components of the probe and the additional oligonucleotide comprise a quencher-fluorescent dye pair.

13. (Currently amended) The method according to claim 11, wherein spatial ~~separation~~ proximity between the probe and the additional oligonucleotide in the inactive form is maintained by a duplex structure.

14. (Previously presented) The method according to claim 1, wherein the probe comprises at least one signal component and wherein an additional oligonucleotide comprises at least one signal component, whereby the signal components of the probe and the additional oligonucleotide are separated from one another spatially in the inactive form, and are brought into spatial proximity to one another by the hybridization of the probe to the primer extension product.

15. (Previously presented) The method according to claim 14, wherein the signal components of the probe and the additional oligonucleotide in the active form generate a signal via a fluorescence-resonance energy transfer.

16. (Previously presented) The method according to claim 14, wherein the additional oligonucleotide binds in immediate proximity to the probe on the primer extension product.

17. (Previously presented) The method according to claim 1, wherein the amplifying step comprises amplifying several sequences simultaneously.

18. (Previously presented) The method according to claim 1, wherein the amplifying step

comprises amplifying using two primers whose 5'-ends are joined with a probe via a linker.

19. (Previously presented) The method according to claim 18, wherein the two primers comprise different signal components.

20. (Previously presented) The method according to claim 18, wherein one of the primers comprises a methylation-specific probe and the other primer comprises a non-methylation-specific probe.

21. (Previously presented) The method according to claim 1, wherein the amplifying step comprises amplifying using two primers whose 5'-ends are joined with a probe via a linker and wherein one of the primers comprises a methylation-specific probe and the other primer comprises a mutation-specific or allele-specific probe.

22. (Previously presented) The method according to claim 1, wherein the amplifying step comprises performing a non-methylation-specific PCR amplification, wherein the probe comprises a quencher and a dye molecule, which are found in spatial proximity to one another in the inactive form, and which are separated from one another by the hybridization of the probe to the primer extension product.

23. (Previously presented) The method according to claim 1, wherein the amplifying step

comprises performing an MSP amplification, wherein the probe comprises a quencher and a dye molecule which are found in spatial proximity to one another in the inactive form, and which are separated from one another by the hybridization of the probe to the primer extension product.

24. (Previously presented) The method according to claim 1, wherein the amplifying step comprises performing a heavy methyl amplification, wherein the probe comprises a quencher and a dye molecule which are found in spatial proximity to one another in the inactive form, and which are separated from one another in the hybridization of the probe to the primer extension product.

25. (Previously presented) The method according to claim 1, wherein the amplifying step comprises performing a non-methylation-specific amplification, wherein the probe comprises a dye molecule and another oligonucleotide comprises a quencher which are found in spatial proximity to one another in the inactive form, and which are separated from one another by the hybridization of the probe to the primer extension product.

26. (Previously presented) The method according to claim 1, wherein the amplifying step comprises performing an MSP amplification, wherein the probe comprises a dye molecule and another oligonucleotide comprises a quencher which are found in spatial proximity to one another in the inactive form, and which are separated from one another in the hybridization of the probe to the primer extension product.

27. (Previously presented) The method according to claim 1, wherein the amplifying step comprises performing a heavy methyl amplification, wherein the probe comprises a dye molecule and another oligonucleotide comprises a quencher which are found in spatial proximity to one another in the inactive form, and which are separated from one another in the hybridization of the probe to the primer extension product.

28. (Previously presented) The method according to claim 23, wherein the amplifying step comprises performing the amplification using two primers whose 5'-ends are joined with a probe via a linker, wherein one of the primers comprises a methylation-specific probe and the other primer comprises a non-methylation-specific probe.

29. (Canceled)

30. (Canceled)

31. (Canceled)